United States Department of Agriculture
Agricultural Marketing Service, Science & Technology
Pesticide Date Program

SOP No.: PDP-LABOP-01		Page 1 of 8
Title: Sample Receipt, Storage, Archiving, and Disposal		
Revision: 6	Replaces: 01/01/00	Effective: 04/01/01

1. Purpose:

To provide standard procedures for the receipt, storage, archiving and disposal of USDA/AMS Pesticide Data Program (PDP) samples.

2. Scope:

This standard operating procedure (SOP) shall be followed by all laboratories conducting residue studies for PDP, including support laboratories conducting stability or other types of studies that may impact the program.

3. Outline of Procedure:

5.1 Sample Receipt
5.2 Sample Storage
5.3 Storage of Extracts
5.4 Storage of Reserve Samples
5.5 Disposal of Reserve Samples
5.6 Disposal of Extracts

4. References:

- USDA/AMS-EPA Planning Meeting, March 14, 2001
- USDA/AMS PDP Quality Assurance(QA)/Technical Meeting, February 21-22, 2001
- PDP Program Plan, January – June 2001
- Federal/State Meeting, October 31 - November 2, 2000
- Memorandum to State PDP Laboratories from Dr. Robert Epstein, Science Division, AMS, May 22, 1991
- Memorandum to State PDP Laboratories from Dr. Robert Epstein, Science Division, AMS, April 25, 1991

- Good Laboratory Practice Standards 40CFR Parts 160.47 and 160.51, EPA, August 17, 1989

5. Specific Procedures:

These standard operating procedures represent minimum PDP requirements and are presented as general procedures. Each laboratory shall have written operating procedures which shall provide specific details concerning how the procedures have been implemented in that laboratory.

5.1 Sample Receipt

a. The sample is defined as the portion that the collector sends to the laboratory, usually between one and seven pounds. If the laboratory receives an unusually large sample (e.g., more than ten pounds) then the laboratory may randomly select the targeted weight of product (e.g., 5 pounds for oranges) to homogenize. Document on the Laboratory Information Form (LIF) that the sample was unusually large.

b. Staff trained in the receipt of PDP samples shall inspect the sample upon arrival, verifying that the correct commodity was received and that the information on the Sample Information Form (SIF) and sample identification match each other.

c. If the sample container integrity is compromised, the proper amount of sample is not present, or the sample containers are not adequate, document this at the bottom of the SIF. Documenting date and time received on the SIF is also acceptable.

d. Samples received in damaged condition shall be discarded and not analyzed. In general, a minimum of 50% of the sample, by weight or count, should be available for analysis after any inedibles are discarded in order for the sample

to be considered viable. Sample condition upon arrival (e.g., good, or entire sample mushy - unable to analyze) shall be documented on the SIF.

1. Fresh fruit and vegetable containers shall be inspected upon arrival for any deteriorating condition (e.g., leaking sample container, mold visible through container) which would make the sample inedible or compromise sample integrity.

2. Canned commodities shall be free of large dents or punctures

3. Frozen commodities shall arrive at the laboratory in plastic bags sealed by the collectors. Frozen commodities shall be inspected to determine the extent of thawing during transit. The plastic bags sealed by the collectors shall be opened only if absolutely necessary to determine the condition of the sample(s).

e. Prepared fresh product (e.g., snipped green beans, chopped packaged lettuce) is acceptable as long as varieties are not mixed (e.g., washed, chopped lettuce is iceberg only and not a lettuce mix). The laboratory shall note that the product is prepared (e.g., washed, chopped, snipped) in the comments section of the SIF.

f. Each sample shall be assigned a unique laboratory identification number. This number shall be recorded in permanent non-smearing ink or waterproof, freezeproof stickers on the sample container and the accompanying paperwork.

g. Each laboratory shall maintain a log of samples received. Suggested methods are:

1. Each sample shall be logged into a bound notebook with ink. Minimum information for the logbook includes sample numbers, date and time received (unless documented on the SIF), and who received

the sample. Other information may include commodity type, reference to analytical method, results, and date when results were reported.

2. Computer logs are also acceptable. The laboratory shall assure that verified hardcopies are generated and verified on a routine basis, and that electronic storage of data follows acceptable practices. Refer to SOP PDP-DATA-05.

h. Upon receipt of samples for each scheduled commodity group, the laboratory shall complete a Sample Receipt Form (SRF) and fax a copy of the form to the USDA/AMS Sampling Manager and/or assistant. The SRF shall also document any uncollected samples and any problems encountered.

5.2 Sample Storage

a. All refrigerators and freezers used for PDP samples shall have controlled access. A logbook for each refrigerator and freezer shall be maintained that details sample traffic and periodic temperature checks.

b. The temperature checks shall be made each working day, or the laboratory may use automatic temperature recording devices. Checks shall be recorded in a log book.

c. Samples shall be stored in refrigerators and freezers separate from standards.

d. Fresh fruits and vegetables still sealed in bags shall be refrigerated for a period not to exceed 72 hours until the sample is homogenized.

e. Canned commodities shall be stored in a clean, dry area at room temperature (approximately 22^{o}C) or lower until the sample is homogenized.

f. Frozen commodities that have not thawed in transit (still cold to the touch) shall be held in the freezer at 0^{o}C or lower until the sample is homogenized.

g. Frozen commodities that thawed in transit (not cold to the touch) shall be refrigerated. If possible the sample should be homogenized within 24 hours, however refrigeration of the thawed commodity for a period not to exceed 72 hours is acceptable.

h. If it is not possible to extract the sample after homogenization, then the homogenized samples may be held for a period not to exceed 72 hours at -20°C or lower, or the homogenized sample may be held for longer periods of time at -40°C or lower.

5.3 Storage of Extracts

a. Extracts shall be stored at 4°C or lower. In an internal SOP each laboratory shall establish procedures to assure or develop evidence that evaporation of the solvent since the last use is not occurring in sample extracts. Suggested procedures are weighing the extract plus the bottle/tube or recording/marking the volume of the extract using the calibration markings on the side of the bottle/tube.

b. Injection vials shall be prepared immediately before injection or may be held at 4°C or lower before injection. Each laboratory shall, in an internal SOP, establish procedures for the number of re-injections per vial, as well as the maximum amount of time that a vial may be left at room temperature and still be injected.

5.4 Storage of Reserve Samples

a. The reserve portions of violative samples shall be retained at –40°C or lower for at least 6 months after results are reported, or until further instructions are received from USDA/AMS, Manassas, VA, whichever comes first.

b. The reserve portion of all other samples shall be stored at -40°C or lower until final QA review and successful RDE transmission.

5.5 Disposal of Reserve Samples

a. The reserve sample may be discarded after time period(s) specified in section 5.4 have elapsed. Disposal shall be documented (e.g., in the freezer log or sample log) and shall contain at minimum date of disposal, sample number, and initials of the individual who discarded the sample.

5.6 Disposal of Extracts

a. Each laboratory shall establish the proper procedures for disposal (e.g., disposal by a licensed contractor) of its injection vials in an internal SOP.

b. The extracts may be discarded after time period(s) specified in the laboratory's internal SOP have elapsed. Disposal shall be documented (e.g. in the refrigerator/freezer log) and shall contain a minimum of date of disposal, initials of the individual who discarded the sample, and sample number(s) or set number(s). Each laboratory shall establish the proper procedures for disposal (e.g., disposal by a licensed contractor) of its extracts in an internal SOP.

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Revision 6 February 2001 QA/Technical Meeting, Mitzi McLeod

- Updated section 4, "References"
- Added sample definition (acceptable weight) to subsection 5.1
- Modified container and sample inspection statements in subsection 5.1
- Removed unit counting requirement from subsection 5.1
- Added requirement for amount of sample remaining after discarding inedibles to subsection 5.1
- Added prepared product definition and acceptability criteria to subsection 5.1
- Provided instructions for preparation and communication of SRF in subsection 5.1
- Removed references to raw data entry (see SOP PDP-DATA-01)